Cleaning Up Our Information Resources: The Locational Data Improvement Project

EPA's Enterprise Spatial Data Management (ESDM) Program initiated the Locational Data Improvement Project (LDIP), working with the Environmental Protection Agency's (EPA) Executive Steering Committee for Information Resources Management (ESCIRM), as well as the Community-Based Environmental Protection (CBEP) initiative.

The primary objective of this effort is to identify, collect, verify, store, and maintain an accurate, consistently documented set of locational data for entities of environmental concern. A secondary objective is to support the infrastructure to manage these data in a manner that yields integration across national, regional, tribal, and state systems. The intent is to support EPA's movement toward data integration based on location, thereby promoting the use of EPA's data resources for a wide array of cross-media analysis, such as community-based ecosystem management and environmental justice. The LDIP focuses on a three-part strategy for immediate action:

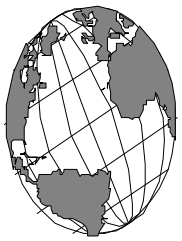
- Use existing regional, state, tribal, and local data sources.
- Optimize the capabilities for data integration by filling existing locational data gaps.
- Develop and centrally maintain locational information as an Agency resource.

Two major activities provide a foundation for the LDIP: development of the Method, Accuracy, and Description (MAD) codes Version 6.1, and development of the Locational Attribute Encoder (LOCATE). The MAD codes were developed in response to the Locational Data Policy (LDP), which mandated that documentation, in the form of a method, accuracy, and description, be provided with latitude and longitude coordinates. The MAD codes have undergone several revisions to provide a standard for documenting critical locational data to facilitate integration of data into the Agency's Geographic Information System (GIS). The current version of MAD has nine required and nine recommended data elements. LOCATE allows a user to validate point locational data to ensure that the data comply with the MAD code standard and meet a minimum level of accuracy.

The LDIP has defined success as obtaining and storing latitude and longitude coordinate information of known origin for 100 percent of EPA's regulated facilities and sites, operable units, and environmental monitoring and observation locations by the end of Calendar Year 2000. In accordance with the LDP, ±25 meters will be the goal for accuracy.

Use Existing Regional, State, and Local Data Sources

Many of EPA's program systems do not contain latitude and longitude coordinate data of documented origin. All EPA Regional Offices will be inventoried to determine the existence of documented coordinate data for regulated facilities and sites, operable units, and environmental monitoring and observation locations. In addition, state, tribal, and local stakeholders will be invited to participate in the project through the EPA regional network. The goal is to incorporate as much local knowledge as possible.



Identify and Fill Existing Data Gaps

EPA's ESDM Program determined that the locational data gaps in major EPA program systems

are significant. A recent report identified over one million facility records with addresses as candidates for obtaining latitude and longitude coordinate information of documented origin. The initial focus of this project is the documentation of facility locations. In the future, efforts will concentrate on collecting documented latitude and longitude coordinates for operable units (pipes, surface containers, and stacks) and environmental monitoring and observation locations (see schedule below). Agency locational data resources will be evaluated periodically to assess and report on locational data documentation and accuracy. These reports will assist in identifying continuing data gaps, as well as areas of improvement.

Develop and Centrally Maintain Locational Information as an Agency Resource

EPA's ESDM Program has developed and maintains Locational Reference Tables (LRT) as part of the Envirofacts Warehouse. LRT will store any data generated through automated geocoding procedures, as well as any documented locational data provided by EPA regions and other stakeholders. The data will be verified for documentation completeness and accuracy and will be made accessible to the public on the Internet. The LRT house latitude and longitude coordinates for EPA-regulated facilities.

ESDM has established a time line for completing geocoding and documentation activities for EPA-regulated facilities, operable units, and environmental monitoring and observation locations. Adherence to these goals will determine the success of LDIP geocoding and documentation activities. The year refers to the end of the calendar year. The time line is as follows:

- Collect documented latitude and longitude coordinates for the remaining facilities by 1997; gather coordinates derived from a Global Positioning System (GPS) for select EPA program systems by 1998.

- Collect documented latitude and longitude coordinates for EPA-regulated operable units by 1998; gather coordinates derived from a GPS for priority EPA-regulated operable units by 1999.

- Collect documented latitude and longitude coordinates for all monitoring and observation locations by 1999; gather coordinates derived from a GPS for priority monitoring and observation locations by 2000.

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